Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Cancelled)

2. (Previously presented) The transcription factor of claim 5 wherein the cell is a vertebrate cell, and presence of the transcription factor in the cell can induce a neuronal phenotype in the cell.

3. (Previously presented) The transcription factor of claim 5 wherein the cell is a vertebrate cell, and presence of the transcription factor in the cell can induce neurite extension in the cell.

4. (Cancelled)

5. (Previously presented) An isolated transcription factor that comprises a first, second and third zinc finger domain, wherein presence of the transcription factor in a vertebrate cell can alter the differentiation state of the cell and the DNA contacting residues of the first, second, and third domains are as follows:

(i) glutamine at position -1 of the first zinc finger domain; serine at position 2 of the first zinc finger domain; asparagine at position 3 of the first zinc finger domain; and arginine at position 6 of the first zinc finger domain;

(ii) glutamine at position -1 of the second zinc finger domain; serine at position 2 of the second zinc finger domain; asparagine at position 3 of the second zinc finger domain; and lysine at position 6 of the second zinc finger domain; and

(iii) cysteine at position -1 of the third zinc finger domain; serine at position 2 of the third zinc finger domain; asparagine at position 3 of the third zinc finger domain; and arginine at position 6 of the third zinc finger domain.

6. (Previously presented) An isolated transcription factor that comprises amino acids 31 to 109 of SEQ ID NO:2.

7-12. (Cancelled)

13. (Withdrawn-currently amended) A nucleic acid that encodes the transcription factor of claim ~~1~~ 5.

14. (Currently amended) ~~A~~ An isolated recombinant cell that contains the transcription factor of claim 6.

15. (Withdrawn-previously presented) A method of altering the differentiation state of a cell, the method comprising:

expressing a nucleic acid that comprises a sequence encoding the transcription factor of claim 5 in the cell; and

maintaining the cell under conditions that allow the transcription factor to alter the differentiated state of the cell.

16. (Withdrawn-previously presented) A method of altering the differentiation state of a vertebrate cell, the method comprising:

contacting the transcription factor of claim 5 to the cell; and

maintaining the cell under conditions that allow the transcription factor to alter the differentiated state of the cell.

17. (Withdrawn-previously presented) A method of altering the differentiation state of a cell in a subject, the method comprising:

administering the transcription factor of claim 5 or a nucleic acid that comprises a sequence encoding the transcription factor to a subject in an amount effective to alter the differentiation state of at least one cell in the subject.

18. (Withdrawn- previously presented) A method of inducing neurite formation in a vertebrate cell, the method comprising:

providing a vertebrate cell that contains a nucleic acid that comprises a sequence encoding a transcription factor according to claim 36, wherein expression of the transcription factor induces a neuronal phenotype in the vertebrate cell; and

maintaining the vertebrate cell under conditions in which the transcription factor is produced and neurite formation is induced.

19. (Withdrawn-previously presented) The method of claim 18 wherein

(i) the first zinc finger domain comprises SEQ ID NO:177;

(ii) the second zinc finger domain comprises SEQ ID NO:162; and

(iii) the third zinc finger domain comprises SEQ ID NO:173.

20-21. (Cancelled)

22. (Previously presented) The transcription factor of claim 2 wherein the zinc finger domains are domains from different naturally occurring proteins.

23. (Previously presented) The transcription factor of claim 22 wherein the zinc finger domains are domains from different naturally occurring human proteins.

24. (Previously presented) The transcription factor of claim 3 wherein the cell is a mouse neuroblastoma cell.

25. (Previously presented) The transcription factor of claim 2 that further comprises an activation domain.

26. (Previously presented) The transcription factor of claim 5 that further comprises an activation domain.

27. (Previously presented) The transcription factor of claim 6 that further comprises an activation domain.

28. (Withdrawn) A nucleic acid that encodes the transcription factor of claim 2.

29. (Withdrawn) A nucleic acid that encodes the transcription factor of claim 5.

30. (Currently amended) ~~A~~ An isolated recombinant cell that contains the transcription factor of claim 2.

31. (Currently amended) ~~A~~ An isolated recombinant cell that contains the transcription factor of claim 5.

32. (Withdrawn) A method of inducing neurite formation in a vertebrate cell, the method comprising:

providing a vertebrate cell that contains a nucleic acid that comprises a sequence encoding a transcription factor according to claim 5, wherein expression of the transcription factor induces a neuronal phenotype in the vertebrate cell; and

maintaining the vertebrate cell under conditions in which the transcription factor is produced and neurite formation is induced.

33. (Withdrawn-previously presented) A method of inducing neurite formation in a vertebrate cell, the method comprising:

providing a vertebrate cell that contains a nucleic acid that comprises a sequence encoding a transcription factor according to claim 6, wherein expression of the transcription factor induces a neuronal phenotype in the vertebrate cell; and

maintaining the vertebrate cell under conditions in which the transcription factor is produced and neurite formation is induced.

34. (Withdrawn-previously presented) A method of altering the differentiation state of a vertebrate cell, the method comprising:

providing a transcription factor according to claim 5 to the vertebrate cell; and

maintaining the cell under conditions that allow the transcription factor to alter the differentiated state of the cell.

35. (Withdrawn-previously presented) A method of altering the differentiation state of a vertebrate cell, the method comprising:

providing a transcription factor according to claim 6 to the vertebrate cell; and

maintaining the cell under conditions that allow the transcription factor to alter the differentiated state of the cell.

36. (Previously presented) The transcription factor of claim 5 wherein

(i) the first zinc finger domain comprises SEQ ID NO:177, or an amino acid sequence that differs by no more than three substitutions;

(ii) the second zinc finger domain comprises SEQ ID NO:162, or an amino acid sequence that differs by no more than three substitutions; and

(iii) the third zinc finger domain comprises SEQ ID NO:173, or an amino acid sequence that differs by no more than three substitutions.

37. (Previously presented) The transcription factor of claim 36 wherein

(i) the first zinc finger domain comprises SEQ ID NO:177, or an amino acid sequence that differs by no more than two substitutions;

(ii) the second zinc finger domain comprises SEQ ID NO:162, or an amino acid sequence that differs by no more than two substitutions; and

(iii) the third zinc finger domain comprises SEQ ID NO:173, or an amino acid sequence that differs by no more than two substitutions.

38. (Previously presented) The transcription factor of claim 37 wherein

(i) the first zinc finger domain comprises SEQ ID NO:177;

(ii) the second zinc finger domain comprises SEQ ID NO:162; and

(iii) the third zinc finger domain comprises SEQ ID NO:173.

39. (Previously presented) The transcription factor of claim 5 that comprises an amino acid sequence at least 90% identical to amino acids 31 to 109 of SEQ ID NO:2.

40. (Previously presented) The transcription factor of claim 5 that comprises an amino acid sequence at least 95% identical to amino acids 31 to 109 of SEQ ID NO:2.

41. (Previously presented) The transcription factor of claim 5 that comprises an amino acid sequence at least 97% identical to amino acids 31 to 109 of SEQ ID NO:2.